

Masters  
Serial no. 09/864,830  
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Attorney docket no. 83018

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Page 2

Listing of claims

1.-18. (Cancelled)

19. (Currently amended) Software stored on at least one host for converting N networked hosts into a resource

managed system instantiating M managed characteristic applications, comprising:

a first function group which monitors the N hosts and network resources, the first function group running on the N hosts;

a second function group which provides general-purpose application event reporting and event correlation capabilities, the second function group running on the M characteristic applications themselves and reporting to daemons running on the N hosts;

a third function group which provides the reasoning and decision-making capabilities for the resource managed system; and

a fourth function group which provides program control capabilities permitting starting, stopping, and configuring of selected ones of the M managed characteristic applications on respective ones of the N hosts in the resource managed system,  
wherein:

the first function group includes host monitor functions instantiated by first selected ones of the N hosts which generate first data corresponding to performance of all hosts and network devices in the distributed environment;

the second function group includes application monitoring functions instantiated by corresponding ones of the N hosts which generate second data indicative of performance of the M managed characteristic applications; and

one of the first and the second function groups provides metric functions instantiated by second selected ones of the N hosts which generate performance metrics based on the first and the second data and provides the performance metrics to the third function group.

Masters  
Serial no. 09/864,830  
Filed 5/24/2001  
Attorney docket no. 83018

---

Page 3

20. (Original) The software as recited in claim 19, wherein the host monitor functions query all of the N hosts and interconnecting network components on a periodic basis to thereby generate the second data.

21. (Original) The software as recited in claim 19, wherein the host monitoring functions comprises: N host monitors instantiated by the N hosts which collect extensive operating system-level data for each of the N hosts; and

a host discovery function employing Simple Network Management Protocol (SNMP) calls and ping Internet Control Message Protocol (ICMP) calls to determine when a new host comes on-line and if an operating one of the N hosts stops operating.

22. (Original) The software as recited in claim 21, wherein the N host monitors employ operating system-level mechanisms to retrieve information representing the status, the configuration, and the performance on each of the N hosts.

23. (Original) The software as recited in claim 22, wherein the retrieved information includes:

- operating system version and machine configuration;
- CPU configuration, status, and utilization;
- memory configuration and usage;
- network configuration, status, and utilization;
- filesystem configuration, status, and utilization; and
- process statuses including CPU, memory, network, and filesystem utilization for each process.

24. (Original) The software as recited in claim 21, wherein the host monitoring functions further comprise N history server functions which collect data from the N host monitors, respectively, to thereby maintain status and performance histories on each of the N hosts.

Masters  
Serial no. 09/864,830  
Filed 5/24/2001  
Attorney docket no. 83018

---

Page 4

25. (Original) The software as recited in claim 19, wherein:  
the application monitor function further comprises:

M instrumentation application programming interfaces (APIs) linked to the M copies of the managed characteristic application; and

M instrumentation daemons which receive instrumentation data generated API calls from the M copies of the managed characteristic application and reformat the instrumentation data into instrumentation event messages; and

the first data is generated responsive to the instrumentation event messages.

26. (Original) The software as recited in claim 19, wherein the first function group comprises:

host monitor functions, which reside on and collect operating system-level data each of the N hosts;

history server functions, which collect system-level data from the Host Monitor functions, respectively, maintain status and performance histories on each of the N hosts; and

a host discovery function which uses Simple Network Management Protocol (SNMP) calls and ping Internet Control Message Protocol (ICM) calls to determine when new hosts come on-line and if an operating one of the N hosts ceases to function.

27. (Original) The software as recited in claim 19, wherein the second function group comprises:

instrumentation API Libraries which are linked with the N copies of the managed characteristic application and provide function call interfaces by which the application copies generate instrumentation data;

instrumentation daemon functions, which reside on each of the N hosts, that read the instrumentation data generated by the N copies of the managed characteristic application, that reformat the data into instrumentation event messages, and that send the event messages to instrumentation collector functions;

Masters

Page 5

Serial no. 09/864,830

Filed 5/24/2001

Attorney docket no. 83018

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the instrumentation collector functions, which are operatively coupled to the instrumentation daemon functions, that forward the received event messages to instrumentation correlator functions and instrumentation broker functions;

the instrumentation correlator functions that provide grammar-driven capabilities for correlating, combining, and reformatting application data into higher-level metrics provided to the third function group; and

the instrumentation broker functions that receive event messages from the instrumentation collector functions and perform task-specific reformatting and data manipulation for driving displays.

28. (Original) The software as recited in claim 19, wherein one of the M managed characteristic applications comprises a scalable application.

29. (Original) The software as recited in claim 19, wherein one of the M managed characteristic applications comprises a fault tolerant application, where the degree of fault tolerance is selectable by a user.

30. (Currently amended) The software as recited in claim [[18]] 19, wherein one of the M managed characteristic application comprises a selectable priority application.